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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,577

10/21/2005

Toshiyuki Kanno

FUJI:344

4816

37013 7590 02/22/2010  
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EXAMINER

KASHNIKOW, ERIK

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

02/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail@rkmlegalgroup.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,577	<b>Applicant(s)</b> KANNO ET AL.	
	<b>Examiner</b> ERIK KASHNIKOW	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-5, 8, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aida et al. (EP 0 405 982) in view of Funayama et al. (5,128,286) and Koizumi et al. (US 6,491,992) used as an evidentiary reference.

3. In regards to claim 1 Aida et al. teach a thermoplastic resin which incorporates inorganic filler, flame retardant agent (page 1 lines 3-8), glass fiber (reinforcing fibers)(page 5 lines 23-25) and a cross linking agent in an amount of 0.01-7 parts per weight per 100 parts of the thermoplastic polymer composition (claim 2). Aida et al. teach that the resin is cross linked by a heat treatment (claim 1). Aida teaches that the inorganic fiber is subjected to a surface treatment with a crosslinking agent prior to being added to the composition (page 5 lines 25-30). Finally Aida et al. teach the resin can be molded into various shapes (page 3 lines 26-30).

4. In regards to claim 3 Aida et al. teach that at least one cross linking agent is used, which means that more than one may also be used (page 5 lines 7-8).

5. In regards to claim 8 Aida et al. teach that the inorganic filler be present in amounts of 5-200 parts per 100 parts of the resin composition, this relates to 4.75-

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66.66% of the entire resin composition, which overlaps Applicant's range (page 5 lines 31-35).

6. In regards to claim 10 Aida et al. teach that the resin composition contains a flame retardant in amounts of 4.75-66.6% by weight of the entire resin composition (page 5 line 36 page 6 line 6).

7. In regards to claim 12 Aida et al. teach that their invention may be used for insulating of electrical wires (page 3 lines 25-30).

8. As stated above Aida et al. teach molded articles which contain a cross linking agent as well as a multitude of inorganic fillers, however they are silent regarding the specific cross linking agents of Applicants invention.

9. In regards to claim 4 Aida et al. teach that the primary resin in the molded article may be a polyamide (page 3 line 54).

10. In regards to claims 4 Funyama et al. teach a cross linking agent which has a main skeleton which comprises an N element containing cyclic compound, this is the borazine cross linking agent shown as compound (iii) (column 7 lines 5-18).

11. In regards to claim 15 Funyama et al. teach that the R4 components of the borazine may be hydrogens or alkenyl groups. While they are silent regarding the specific examples of the Applicant's side chains it would be obvious to one of ordinary skill in the art at the time of the invention to pick the side chains using the functional groups listed by Funyama that best cross links the desired compounds.

12. It would be obvious to one of ordinary skill in the art at the time of the invention to modify the Invention of Aida et al. with that of Funyama et al. because the invention of

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Aida et al. which offers a molded product that is superior in moldability without loss of mechanical strength (page 3 lines 17-22) would benefit from the boron compounds which improves mechanical strength at high temperatures (column 3 lines 5-10).

13. As stated above Aida et al. and Funyama et al. teach the molded articles of applicant's invention however they are silent regarding adsorbing the cross linking agents onto an inorganic filler. However as all aspects of the invention are taught (i.e. the inorganic fillers and crosslinking agents) and as stated above Aida et al. teach that the inorganic filler undergoes a surface treatment with a crosslinking agent to increase dispersibility (page 5 lines 25-30) it must necessarily be so that some of, if not all of the crosslinking agent would be adsorbed onto the inorganic filler. It is further noted that Koizumi et al. teach that cross linking agents are known in the art to improve dispersibility in rubbery substances (column 4 lines 65-67), which would include the cross linking agents disclosed in Funyama et al. It is further noted that the list of compounds to be used in the surface treatment of Aida et al. is not limiting.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aida et al. (EP 0 405 982) in view of Funayama et al. (5,128,286) and Koizumi et al. (US 6,491,992) used as an evidentiary reference as applied to claim 1 above and in further view of Marzocchi (3,888,645).

15. As stated above Aida et al. teach molded articles which contain a cross linking agent as well as inorganic fillers, including glass fibers included in amounts ranging

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from 4.75-66.6% by weight of the entire resin (page 5 lines 19-35) however they are silent regarding coating the glass fibers with a resin.

16. Marzocchi teaches a method of treating glass fibers used as fiber reinforcement. Marzocchi teaches that the glass fibers are coated with a resin (claim 1).

17. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the article of Aida et al. with the glass fibers of Marzocchi et al. because the article of Aida et al. which has a product that is superior in moldability without loss of mechanical strength (page 3 lines 17-22) would benefit from the improved abrasion resistance (column 1 lines 3-7) of the glass fibers of Marzocchi.

18. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aida et al. (EP 0 405 982) in view of Funayama et al. (5,128,286) and Koizumi et al. (US 6,491,992) used as an evidentiary reference as applied to claim 1 above and in further view Usuki et al. (US 4,889,885).

19. As stated above Aida et al. teach molded articles which contain a cross linking agent as well as inorganic fillers, including clay in ranges from 4.75-66.66% by weight (page 5 lines 19-35) but are silent regarding the clay being a stratified clay.

20. Usuki et al. teach a composite material with high mechanical strength and heat resistance (column 1 lines 7-10). Usuki et al. teach that stratified clay is used as an inorganic portion of the composite material (column 7 lines 23-30).

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the article of Aida et al. with the material of Usuki et al. because the

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article of Aida et al. which has a product that is superior in moldability without loss of mechanical strength (page 3 lines 17-22) would benefit from the high mechanical strength and heat resistance (column 1 lines 7-11) of the material of Usuki et al.

22. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aida et al. (EP 0 405 982) in view of Funayama et al. (5,128,286) and Koizumi et al. (US 6,491,992) used as an evidentiary reference as applied to claim 1 above and in further view Tanaka et al. (JP 11-180990).

23. As stated above Aida et al. teach molded articles which contain a cross linking agent and inorganic fillers as well as phosphorous based flame retardants (page 5 lines 5—53), however they are silent regarding monofunctional phosphorus based flame retardants.

24. Tanaka et al. teach specific organophosphorus compounds, and specifically mention alkenly phosphinate compounds as preferred examples as flame retardants (Claim 1).

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the article of Aida et al. with the material of Tanaka et al. because the article of Aida et al. which has a product that is superior in moldability without loss of mechanical strength (page 3 lines 17-22) would benefit from the economic benefits of ease of manufacturing and separation refinement of material of Tanaka et al ([0026]).

### ***Response to Arguments***

26. Applicant's arguments with respect to claim 1, the rejection has been amended to show how the rejection meets the newly added limitation.

27. Examiner notes that while Funayama, Marzocchi, Koizumi and Tanaka do not disclose all the features of the present claimed invention, they are used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is (571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikow  
Examiner  
Art Unit 1794

/Rena L. Dye/  
Supervisory Patent Examiner, Art Unit 1794